SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

SUPER LUBE

Creation date	14. May 2011		
Revision date	07. May 2018	Version	4.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Substance / mixture	mixture
Number	R 34403

1.2. Relevant identified uses of the substance or mixture and uses advised against

mixture's intended use	Grease.

The use descriptors

SU 3	Industrial uses: Uses of substances as such or in preparations* at industrial sites
SU 22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Disapproved uses of mixture	For professional use only.

1.3. Details of the supplier of the safety data sheet

Supplier

Name or trade name	RETECH, s.r.o.
Address	Vackova 1541/4, Praha 5 - Stodůlky, 155 00 Czech Republic
Identification number (ID)	25018205
Phone	+420327596428
E-mail	info@retech.cz
Web address	www.retech.com

Competent person responsible for the safety data sheet

Name	RETECH, s.r.o.
E-mail	info@retech.cz

1.4. Emergency telephone number

RETECH, Suchdol 212, 285 02 Suchdol u Kutné Hory, Czech Republic; Telephone number: +420 327 596 128 (7.30-16.00 hour)
Poisoning information centre, Na Bojišti 1, Praha, Czech Republic, Tel.: non-stop +420 224 919 293 or +420 224 915 402, Information on health risks only - acute poisoning of humans and animals.

SECTION 2: Hazards identification

2.1. Substance or mixture classification

Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

Aerosol 1, H222, H229
Asp. Tox. 1, H304
Skin Irrit. 2, H315
Eye Irrit. 2, H319
STOT SE 3, H336
Aquatic Chronic 2, H411

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse physico-chemical effects

Extremely flammable aerosol. Pressurised container: May burst if heated.

Most serious adverse effects on human health and the environment

May cause drowsiness or dizziness. Causes skin irritation. May be fatal if swallowed and enters airways. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazard pictogram

Signal word

Danger

Hazardous substances

pentane
hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane
propan-2-ol
1-methoxy-2-propanol

Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P391	Collect spillage.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of contents/container to according to applicable regulations.

Supplemental information

>=30 % aliphatic hydrocarbons

2.3. Other hazards

Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture of substances and additives specified below.

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note.
CAS: 106-97-8 EC: 203-448-7 Registration number: 01-2119474691-32	butane (containing < 0,1 % butadiene (203-450-8))	25-50	Flam. Gas 1, H220 Press. Gas, H280	
CAS: 109-66-0 EC: 203-692-4 Registration number: 01-2119459286-30	pentane	10-25	Flam. Liq. 1, H224 Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Chronic 2, H411	1
EC: 921-024-6 Registration number: 01-2119475514-35	hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	10-25	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Chronic 2, H411	
CAS: 74-98-6 EC: 200-827-9 Registration number: 01-2119486944-21	propane	2,5-10	Flam. Gas 1, H220 Press. Gas (compressed gas), H280	
CAS: 67-63-0 EC: 200-661-7 Registration number: 01-2119457558-25	propan-2-ol	1-2,5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	
Index: 603-064-00-3 CAS: 107-98-2 EC: 203-539-1	1-methoxy-2-propanol	1-2,5	Flam. Liq. 3, H226 STOT SE 3, H336	1
CAS: 1305-62-0	calcium-dihydroxide	1-2,5	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335	
CAS: 95-38-5 EC: 202-414-9 Registration number: 01-2119777867-13	2-(2-heptadec-8-enyl-2-imidazolin-1-yl) ethanol	0,025-0,1	Acute Tox. 4, H302 Skin Corr. 1C, H314 STOT RE 2, H373 Aquatic Acute 1, H400, M=1 Aquatic Chronic 1, H410, M=10	

Notes

1 Substance for which exposure limits of Community for working environment exist.

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet.

Inhalation

Terminate the exposure immediately; move the affected person to fresh air. In the event of issues, find medical advice.

Skin contact

Immediately wash with water and soap and rinse thoroughly.

Eye contact

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. In the event of issues, find medical advice.

Ingestion

DO NOT INDUCE VOMITING! Provide medical treatment.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation

not available

Skin contact

not available

Eye contact

not available

Ingestion

not available

4.3. Indication of any immediate medical attention and special treatment needed

not available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

not available

5.3. Advice for firefighters

Use a self-contained breathing apparatus and full-body protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide sufficient ventilation. Use personal protective equipment for work. Keep unprotected persons away.

6.2. Environmental precautions

Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system.

6.3. Methods and material for containment and cleaning up

Provide sufficient ventilation. Do not flush with water or aqueous cleansing agents. Dispose of the collected material according to the instructions in the section 13.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care. Do not spray on an open flame or other ignition source. The product should be used only in the areas where it is not in contact with open fire and other ignition sources. No smoking. Take precautionary measures against static discharge. Pressurised container: May burst if heated. Keep away from sources of heating, ignition and direct sunlight. Do not pierce or burn, even after use.

7.2. Conditions for safe storage, including any incompatibilities

Keep cool. Observe official regulations on storing packagings with pressurized containers.

Storage class 2B - Aerosols

The specific requirements or rules relating to the substance/mixture

Store in tightly closed containers in a cool, dry place intended for this purpose. Keep away from sources of heating, ignition and direct sunlight.

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

European Union

Substance name (component)	Type	Time of exposure	Value	Note	Source
pentane (CAS: 109-66-0)	OEL	8 hours	3000 mg/m³		EU limits
	OEL	8 hours	1000 ppm		
1-methoxy-2-propanol (CAS: 107-98-2)	OEL	8 hours	375 mg/m³		EU limits
	OEL	8 hours	100 ppm		
	OEL	Short-term	568 mg/m³		
	OEL	Short-term	150 ppm		

United Kingdom of Great Britain and Northern Ireland

Substance name (component)	Type	Time of exposure	Value	Note	Source
butane (containing < 0,1 % butadiene (203-450-8)) (CAS: 106-97-8)	WEL	8 hours	600 ppm		GBR
	WEL	8 hours	1450 mg/m³		
	WEL	15 minutes	1810 mg/m³		
	WEL	15 minutes	750 ppm		
pentane (CAS: 109-66-0)	WEL	8 hours	1800 mg/m³		GBR
	WEL	8 hours	600 ppm		
propan-2-ol (CAS: 67-63-0)	WEL	8 hours	999 mg/m³		GBR
	WEL	15 minutes	1250 mg/m³		
	WEL	8 hours	400 ppm		

United Kingdom of Great Britain and Northern Ireland

Substance name (component)	Type	Time of exposure	Value	Note	Source
propan-2-ol (CAS: 67-63-0)	WEL	15 minutes	500 ppm		GBR
1-methoxy-2-propanol (CAS: 107-98-2)	WEL	8 hours	375 mg/m³	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.	GBR
	WEL	15 minutes	560 mg/m³	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.	
	WEL	8 hours	100 ppm	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.	
	WEL	15 minutes	150 ppm	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.	
calcium-dihydroxide (CAS: 1305-62-0)	WEL	8 hours	5 mg/m³		GBR

DNEL

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Inhalation	0.46 mg/m³	Systemic chronic effects	
Workers	Inhalation	14 mg/m³	Local chronic effects	
Workers	Dermal	0.06 mg/kg bw/day	Systemic chronic effects	
Workers	Dermal	2 mg/kg bw/day	Local chronic effects	

hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

Workers / consumers	Route of exposure	Value	Effect	Determining method
Consumers	Oral	699 mg/kg bw/day	Systemic chronic effects	
Consumers	Dermal	699 mg/kg bw/day	Systemic chronic effects	
Workers	Dermal	773 mg/kg bw/day	Systemic chronic effects	
Consumers	Inhalation	608 mg/m³	Systemic chronic effects	
Workers	Inhalation	2035 mg/m³	Systemic chronic effects	

pentane

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Inhalation	3000 mg/m³	Systemic chronic effects	
Consumers	Inhalation	643 mg/m³	Systemic chronic effects	
Workers	Dermal	432 mg/kg bw/day	Systemic chronic effects	
Consumers	Dermal	214 mg/kg bw/day	Systemic chronic effects	
Consumers	Oral	214 mg/kg bw/day	Systemic chronic effects	

propan-2-ol

Workers / consumers	Route of exposure	Value	Effect	Determining method
Consumers	Oral	26 mg/kg bw/day	Systemic chronic effects	
Consumers	Dermal	319 mg/kg bw/day	Systemic chronic effects	
Workers	Dermal	888 mg/kg bw/day	Systemic chronic effects	
Consumers	Inhalation	89 mg/m³	Local chronic effects	
Workers	Inhalation	500 mg/kg	Systemic chronic effects	

PNEC

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol

Route of exposure	Value	Determining method
Freshwater environment	0 mg/l	
Seawater	0 mg/l	
Microorganisms in wastewater treatment plants	0.27 mg/l	

2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol

Route of exposure	Value	Determining method
Freshwater sediment	0.376 mg/kg of dry substance of sediment	
Seawater	0.038 mg/kg of dry substance of sediment	
Soil (agricultural)	0.075 mg/kg of dry substance of soil	

pentane

Route of exposure	Value	Determining method
Freshwater environment	0.23 mg/l	
Seawater	0.23 mg/l	
Water (occasional leak)	0.88 mg/l	
Microorganisms in wastewater treatment plants	3.6 mg/l	
Freshwater sediment	1.2 mg/kg of dry substance of sediment	
Sea sediments	1.2 mg/kg of dry substance of sediment	
Soil (agricultural)	0.55 mg/kg of dry substance of soil	

8.2. Exposure controls

Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest. Do not inhale gases and vapours. Do not inhale aerosols.

Eye/face protection

Tightly sealed goggles.

Skin protection

Protection of hands: Solvent resistant gloves. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. Material of gloves: Nitrile rubber, NBR. Penetration time of glove material: The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
Other protection: protective workwear.

Respiratory protection

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self□-containedrespiratory protective device. Filter AX/P2.

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	aerosol
Physical state	no data available at 20°C
color	whitish
Odour	characteristic
Odour threshold	data not available
pH	data not available
Melting point/freezing point	data not available
Initial boiling point and boiling range	-44,5 °C
Flash point	-97 °C
Evaporation rate	data not available

Flammability (solid, gas)	Extremely flammable aerosol.
Upper/lower flammability or explosive limits	
flammability limits	data not available
explosive limits	
bottom	0.8 %
upper	20.0 %
Vapour pressure	2100 hPa at 20 °C
Vapour density	data not available
Relative density	data not available
Solubility(ies)	
solubility in water	almost insoluble
solubility in fats	data not available
Partition coefficient: n-octanol/water	data not available
Auto-ignition temperature	data not available
Decomposition temperature	data not available
Viscosity	data not available
Explosive properties	The product does not have explosive properties but can be explosive when blended with air.
Oxidising properties	data not available

data not available

9.2. Other information

Density	0.64 g/cm^3 at 20 °C
ignition temperature	>200 °C
content of organic solvents (VOC)	82.8 %
solid content (dry matter)	13.8 % volume
Max. VOC content in the product in its ready to use condition	527.4 g/l

Product is not selfigniting.

SECTION 10: Stability and reactivity

10.1. Reactivity

not available

10.2. Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

10.3. Possibility of hazardous reactions

Unknown.

10.4. Conditions to avoid

not available

10.5. Incompatible materials

not available

10.6. Hazardous decomposition products

Unknown.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

No toxicological data is available for the mixture.

Acute toxicity

Based on available data the classification criteria are not met.

hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD_{50}	>5840 mg/kg		Rat	
Dermal	LD_{50}	>2920 mg/kg		Rat	
Inhalation	LC_{50}	>25 mg/l	4 hour	Rat	

propan-2-ol

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD_{50}	5840 mg/kg		Rat	
Dermal	LD_{50}	13900 mg/kg		Rabbit	
Inhalation	LC_{50}	25000 mg/m³	6 hour	Rat	

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

Germ cell mutagenicity

Based on available data the classification criteria are not met.

Carcinogenicity

Based on available data the classification criteria are not met.

Reproductive toxicity

Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure

May cause drowsiness or dizziness.

Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

Aspiration hazard

May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

Toxic to aquatic life with long lasting effects.

hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

Parameter	Value	Time of exposure	Species	Environment
EC_{50}	3 mg/l	48 hour	Daphnia	

pentane

Parameter	Value	Time of exposure	Species	Environment
LC_{50}	4.26 mg/l	96 hour	Fishes (Oncorhynchus mykiss)	
EC_{50}	2.7 mg/l	48 hour	Invertebrates (Daphnia magna)	
EC_{50}	10.7 mg/l	72 hour	Algae (Pseudokirchneriella subcapitata)	
NOEC	7.51 mg/l	72 hour	Algae (Pseudokirchneriella subcapitata)	

propan-2-ol

Parameter	Value	Time of exposure	Species	Environment
LC_{50}	9714 mg/l	24 hour	Invertebrates (Daphnia magna)	
LC_{50}	9640 mg/l	96 hour	Fishes (Pimephales promelas)	
LOEC	1000 mg/l	8 day	Algae	

12.2. Persistence and degradability

Not available.

12.3. Bioaccumulative potential

Not available.

12.4. Mobility in soil

Not available.

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Other adverse effects

Ecotoxical effects: Remark: Toxic for fish

Additional ecological information:

General notes: Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water. Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Toxic for aquatic organisms.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste.

Legislation of waste

Council Directive 75/442/EEC on waste, as amended. Decree No. 383/2001 Coll., on details regarding waste handling as amended. Decree No. 93/2016 Coll., (waste catalogue) as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

Waste type code

16 03 05 organic wastes containing dangerous substances

Packaging waste type code

15 01 11 metallic packaging containing a dangerous solid porous matrix (for example asbestos), including empty pressure containers

SECTION 14: Transport information

14.1. UN number

UN 1950

14.2. UN proper shipping name

AEROSOLS

14.3. Transport hazard class(es)

2 Gases

14.4. Packing group

not available

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS

Product contains environmentally hazardous substances: (2-(2- heptadec-8-enyl-2-imidazolin-1-yl)ethanol)

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not available

Additional information

Hazard identification No.	(Kemler Code)
UN number	**1950**
Classification code	5F
Safety signs	2.1+hazardous for the environment

Road transport ADR

Tunnel restriction code	(D)

Marine transport - IMDG

Hazard initiator	PENTANES, Naphtha (petroleum), hydrotreated light
EmS (emergency plan)	F-D, S-U
Marine pollution	Yes

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended. The Act No. 350/2011 Coll., on Chemical Substances and Chemical Preparations as amended (the Chemical Act). Decree No. 80/2014 Coll., amending the Decree No. 194/2001 Coll., laying down technical requirements for aerosol sprays as amended. Decree No. 432/2003 Coll., laying down conditions for assigning categories to individual jobs, limit values of indices from biological exposure tests, conditions for the sampling of biological materials for biological exposure and the particulars of the reports on work with asbestos and biological agents as amended. REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents, as ammended.

15.2. Chemical safety assessment

not available

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Guidelines for safe handling used in the safety data sheet

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P391	Collect spillage.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50 °C/122 °F.
P501	Dispose of contents/container to according to applicable regulations.

A list of additional standard phrases used in the safety data sheet

EUH 066 Repeated exposure may cause skin dryness or cracking.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
DNEL	Derived no-effect level
EC	Identification code for each substance listed in EINECS
EC_{50}	Concentration of a substance when it is affected 50% of the population
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
IC_{50}	Concentration causing 50% blockade
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC_{50}	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD_{50}	Lethal dose of a substance in which it can be expected death of 50% of the population
LOAEC	Lowest observed adverse effect concentration
LOAEL	Lowest observed adverse effect level
log Kow	Octanol-water partition coefficient
MARPOL	International Convention for the Prevention of Pollution From Ships
NOAEC	No observed adverse effect concentration
NOAEL	No observed adverse effect level
NOEC	No observed effect concentration
NOEL	No observed effect level
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted no-effect concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative
Acute Tox.	Acute toxicity

Aerosol	Flammable aerosol
Aquatic Acute	Hazardous to the aquatic environment
Aquatic Chronic	Hazardous to the aquatic environment
Asp. Tox.	Aspiration hazard
Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation
Flam. Gas	Flammable gas
Flam. Liq.	Flammable liquid
Press. Gas	Gases under pressure
Skin Corr.	Skin corrosion
Skin Irrit.	Skin irritation
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

The changes (which information has been added, deleted or modified)

The version 4.0 replaces the SDS version from 22.11.2017. Changes were made in sections 2, 15 and 16.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.